

Experiment-16

Write a C program for implementing a Lexical Analyzer to Count the number of characters, words, and lines .

Program:

```
#include <stdio.h>
```

```
int main() {
```

```
    char c;
```

```
    int characters = 0, words = 0, lines = 0;
```

```
    printf("Enter text (Ctrl+D or Ctrl+Z to end input):\n");
```

```
    while ((c = getchar()) != EOF) {
```

```
        characters++;
```

```
        // Check for a new line
```

```
        if (c == '\n') {
```

```
            lines++;
```

```
            words++;
```

```
        }
```

```
        // Check for a space or tab to count words
```

```
        if (c == ' ' || c == '\t') {
```

```
        words++;  
    }  
}
```

// Handling the case where the last line might not end
with a newline

```
if (characters > 0) {  
    lines++;  
    words++;  
}
```

```
printf("Total number of characters: %d\n", characters);  
printf("Total number of words: %d\n", words);  
printf("Total number of lines: %d\n", lines);
```

```
return 0;  
}
```

Out put:

```
C:\Users\vavil\OneDrive\Doc... X + v
Enter text (Ctrl+D or Ctrl+Z to end input):
this is a c program and
this program is count number of characters
^Z
Total number of characters: 70
Total number of words: 15
Total number of lines: 4

-----
Process exited after 84.01 seconds with return value 0
Press any key to continue . . . |
```

31°C
Partly sunny

Search

ENG IN

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